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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/778,919	02/08/2001	Yasunobu Hashimoto	1466.1029	5835

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EXAMINER

AWAD, AMR A

ART UNIT	PAPER NUMBER
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2675

DATE MAILED: 08/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/778,919

**Applicant(s)**

HASHIMOTO, YASUNOBU

**Examiner**

Amr Awad

**Art Unit**

2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All   b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

2. The references cited in the Information Disclosure Statement filed on February 8, 2001 have been considered by the Examiner; see attached PTO-1449.

***Specification***

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

***Claim Rejections - 35 USC § 112***

4. Claims 2 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. it is not clear to the examiner the relationship between the cell position and the virtual display surface. The citation of the virtual display surface is mentioned in the specification (summary of the invention) substantially similar to the claim language, and there is no other description that would assist the examiner to clarify the relationship. The examiner respectfully requests a clarification.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Betsui et al. (US patent NO. 5,825,128; hereinafter referred to as Betsui) in view of Shigeta (US patent NO. 5,659,226).

As to independent claim 1, Betsui a method for displaying an image on a plasma display (figure 3) that includes, using a display device having a display surface (11) including plural cell columns each of which is a set of cells having the same light emission color, the display device having a cell arrangement structure in which cell positions in the column direction are shifted from each other between the neighboring cell columns (col. 4, lines 17-48).

Betsui does not expressly teach performing an interlaced display by changing the combination of cells of a display line that is perpendicular to the column direction in every field between the neighboring cell columns of the same light emission color.

However, Shigeta teaches a plasma display device that includes interlacing (between the odd and the even lines) by changing the combination of cells of display that is perpendicular to the column direction in every field between the neighboring cell columns of the same light emission color (figures 5-6, 7, col. 5, lines 7-54 and col. 6, lines 23-38).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Shigeta interlacing by changing the combination of the cells of the display, to be incorporated to Betsui's device so as motivated by Shigeta, to increase in fineness of the display (abstract), and to make it easier to precisely manufacturing the row electrodes in excess of a patterning precision and width of the electrodes (col. 1, lines 42-45).

As to claim 2, the specification of the invention does not specify what is the virtual display surface. Therefore, the luminance cited in Shigeta's reference (col. 6, lines 23-38) fairly reads on the claim because the virtual display can be the medium in which the display is observed.

As to claim 3, the claim is an apparatus claim corresponds to method claim 1 and would be analyzed as previously discussed with respect to claim 1.

As to claim 4, figures 4A, 4B and 5A of Betsui's device fairly reads on the constant pitch of claim 3 (see Betsui, col. 6, lines 24-39).

As to claim 5, the specification of the invention does not specify what is the virtual display surface. Therefore, the luminance cited in Shigeta's reference (col. 6, lines 23-38) fairly reads on the claim because the virtual display can be the medium in which the display is observed.

As to claim 6, having a single color display is well known in the art of plasma display, which what is disclosed in claim 6.

As to claim 7, as can be seen in both references; the displays have different emission colors (see 4A of Betsui and figure 6 of Shigeta).

As to claim 8, the arrangement of Shigeta (figures 6 and 10) fairly reads on claim 8; see column 5, lines 7-48).

As to claims 9-10, as can be seen in figures 8; Shigeta shows an interlaced image being converted to an interlaced image (col. 6, lines 23-37).

As to claim 11, as seen above; both Betsui and Shigeta teach a plasma display device.

As to claim 12, Betsui (figures 3, 4A) teaches partition (wall 29) for dividing a discharge space for each cell column, and the discharge space is continuous over the entire length of the display surface (col. 4, lines 10-36).

As to claim 13, as can be seen in figure 1 of Betsui's device, the scanning electrodes (X & Y) are arranged to straddle over all columns for selecting one cell in each cell column of each field (4, lines 18-26).

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sakurai et al. (US patent NO. 5,579,027) teaches a driving display apparatus that includes interlacing and zigzagging the display lines.

Shigeta et al. (US patent NO. 5,982,347) teaches driving display apparatus that includes interlacing and zigzagging the display lines.

Takagi et al. (US patent NO. 6,376,986) teaches a plasma display with uneven spaces.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amr Awad whose telephone number is (703)308-8485. The examiner can normally be reached on Monday-Friday, between 9:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Saras can be reached on (703)305-9720. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9314 for regular communications and (703)872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4750.

A handwritten signature in black ink, appearing to read "Amr Awad". The signature is fluid and cursive, with a large loop at the end.

A.A.  
August 19, 2003